

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P10792WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/02963	International filing date (day/month/year) 09.07.2003	Priority date (day/month/year) 15.08.2002
International Patent Classification (IPC) or both national classification and IPC G08B13/194		
Applicant ROKE MANOR RESEARCH LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
  
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
  - \*This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
  - I  Basis of the opinion
  - II  Priority
  - III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV  Lack of unity of invention
  - V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI  Certain documents cited
  - VII  Certain defects in the international application
  - VIII  Certain observations on the international application

Date of submission of the demand  23.12.2003	Date of completion of this report  25.11.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Dascalu, A Telephone No. +49 89 2399-7967



## **INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

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## I. Basis of the report

1. With regard to the elements of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):

### Description, Pages

1-16 as originally filed

## **Claims, Numbers**

1-17 as originally filed

## **Drawings, Sheets**

1/1 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
  - the language of publication of the international application (under Rule 48.3(b)).
  - the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
  - filed together with the international application in computer readable form.
  - furnished subsequently to this Authority in written form.
  - furnished subsequently to this Authority in computer readable form.
  - The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
  - the claims, Nos.:
  - the drawings, sheets:

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5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).  
*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*
6. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- the entire international application,  
 claims Nos. 16,17  
because:  
 the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):  
 the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 16,17 are so unclear that no meaningful opinion could be formed (*specify*):  
**see separate sheet**  
 the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.  
 no international search report has been established for the said claims Nos.
2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:
- the written form has not been furnished or does not comply with the Standard.  
 the computer readable form has not been furnished or does not comply with the Standard.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-15
	No: Claims	
Inventive step (IS)	Yes: Claims	5-8,13,14
	No: Claims	1-4,9-12,15
Industrial applicability (IA)	Yes: Claims	1-15
	No: Claims	

**2. Citations and explanations**

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**see separate sheet**

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**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following document:

D1: EP-A-0 933 726 (MITSUBISHI ELECTRIC CORP) 4 August 1999

**1. Novelty and inventive step of claim 1**

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses (the references in parentheses applying to this document):

- a method for processing video images to detect an event of interest (paragraph 0001), comprising the steps of:
- receiving a video signal representing the video images to be processed (page. 4, lin. 39-40);
- using an iterative learning process to drive a normal pattern of behaviour for each track (p. 5, lin. 2-8);
- comparing present behaviour of the at least one track to the respective normal pattern of behaviour (p. 4, lin. 39-47), and
- in response to the present behaviour falling outside the normal pattern of behaviour, generating an alarm signal (par 0021).

The subject-matter of claim 1 therefore differs from the method in D1 in that two steps of the method contain a "point" instead of "object":

- extracting at least one point feature from the video signal;
- tracking the position and movement of the at least one point feature within the video images to generate a corresponding at least one track, each representing a corresponding point feature.

Thus, claim 1 seems to be new (Article 33(2) PCT).

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The problem to be solved by the present invention may therefore be regarded as to provide a more accurate surveillance of the monitoring zone.

The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step because the extracting and tracking of point features is an obvious step for a skilled person in the field of video surveillance. A point feature is implicitly included in an object feature. An object in a frame image is composed from one or a plurality (a matrix) of points, there is only a different scale.

Moreover, the applicant itself discloses in the description of the application (page 9, lines 5 to 10) that "any algorithm that can be used to extract image features that can be associated with a locality can be used as a point-like feature extractor in the present invention". Furthermore, at page 9, line 26, the applicant discloses that "tracking algorithms are themselves relatively well known and understood".

Thus, claim 1 does not involve an inventive step (Article 33(3) PCT).

**2. Inventive step of claims 2 to 4 and 9 to 12**

The above mentioned dependent claims do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, Article 33(3) PCT, for the following reasons:

claim 2: see D1, par 0021;

claim 3 and 4: D1, par. 0017, an added velocity parameter cannot be considered as involving an inventive step, see the wording "alternative motion features" in the same paragraph suggesting the accumulation of velocity parameter;

claim 9-12: D1, par 0021, 0022, and 0024. Fixing various threshold parameter for video images is however generally known to the person skilled in the art.

**3. Inventive step of claims 5 to 8, 13 and 14**

The combination of the features of dependent claims 5, 6, 7, 8, 13 and 14 is neither known from, nor rendered obvious by, the available prior art and seems to involve an inventive step, Article 33(3) PCT.

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**4. Novelty and inventive step of claim 15**

The same reasoning from section 1 applies, mutatis mutandis, to the subject-matter of the corresponding apparatus claim 15, which therefore seems to be new but not inventive.

**5. The industrial application of claims 1 to 15 is obviously not in doubt, Art. 33(4) PCT.**